THE FRANKLIN INSTITUTE OF THE STATE OF PENNSYLVANIA

FOR THE PROMOTION OF THE MECHANIC ARTS

Hall of the Institute,

Philadelphia, April 7, 1926.

Report No. 2851.

Investigating The Astronomical Work

of

Doctor George Ellery Hale, of Pasadena, California.

Application dated

THE FRANKLIN INSTITUTE OF THE STATE OF PENNSYLVANIA

For the Promotion of the Mechanic Arts

Committee on Science and
the Arts Case No. 2851.

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Committee on Science and The Arts, The Franklin Institute

The Franklin Institute of the State of Pennsylvania acting through its Committee on Science and the Arts, investigating the Astronomical Work of Doctor George Ellery Hale, of Pasadena, California, reports as follows:

George Ellery Hale was born in Chicago, June 29, 1868; was graduated from the Massachusetts Institute of Technology in 1890, and was immediately appointed director of the Kenwood Observatory in Chicago. Here, at the age of twenty-two, Doctor Hale began his life work in the field of astrophysics, aided in his researches by an instrument of his own invention, - the spectroheliometer, described by him in his graduating thesis. Soon, his published papers on solar prominences and sun spot spectra attracted wide attention.

Of academic positions held by him - a word in passing. At the age of twenty-four he was associate professor at the University of Chicago; five years after he was promoted to the chair of astrophysics at Chicago; later to continue his affiliations with the University as non-resident professor.

As coeditor of "Astronomy and Astrophysics", 1892-95, and of the "Astrophysical Journal" from inception to date, Hale's editorial work has been extensive; while the bibliography of his own contributions to science is so voluminous as to preclude listing in this report. He has, in addition, written several books.

Of his executive and administrative ability something should be said. From 1895 to 1904 he was director of the Yerkes Observatory, having given the most minute attention to the planning, building and equipping of it, repeating the process in connection with Mount Wilson Observatory, of which he next became director.

The formation of the National Research Council was due largely to Doctor Hale's efforts. Immediately after the sinking of the Lusitania it was he who proposed to the President of the National Academy of Science that the services of the Academy should be offered to the United States for the purpose of organizing scientific research agencies of the country towards national preparedness. After the Sussex affair the proposal was repeated and approved. President Wilson accepted the offer and on April 26, 1916 an organizing committee was appointed with Doctor Hale as Chairman. The ultimate result was the formation of the National Research Council of which he is now Honorary Chairman.

Scientifically speaking Doctor Hale's first great outstanding accomplishment was the invention of the spectroheliograph, and the important results obtained by him with the instrument. His outstanding discovery was the observation of the Zeeman effect in the sun and the proof of the magnetic nature of sun spots; work which has been characterized as the most important discoveries relating to the sun since the time of Galileo. His most recent

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invention is the spectrohelioscope, an instrument by means of which he is able to follow visually all phenomena in the solar atmosphere.

The character and high grade of Doctor Hale's work has been recognized in many parts of the world. He has been the recipient of medals from numerous scientific societies among which may be mentioned: Rumford, from the American Academy of Arts and Sciences; gold medal from the Royal Astronomical Society; Janssen, from the Paris Academy. Honorary membership in societies, the names of which would take long to enumerate, has been conferred upon him in Holland, Belgium, Sweden, Russia, Canada, Scotland, Ireland, England, Austria and France.

He has had conferred upon him honorary degrees from Manchester, Cambridge, Oxford, California, Columbia, Princeton, Chicago, Yale, Harvard and other universities.

In consideration of his outstanding researches and discoveries relating to the sun and the solar atmosphere and to solar physics, The Franklin Institute awards its Elliott Cresson Medal to Doctor George Ellery Hale, of Pasadena, California.

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